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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,465	10/05/2001	Wilhelm R. Lowell	713511.24	4270
7590 01/25/2006				
Husch & Eppenberger LLC 190 Carondelet Plaza St Louis, MO 63105		EXAMINER TRAN, CON P		
		ART UNIT PAPER NUMBER 2644		

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/972,465	LOWELL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Con P. Tran	2644	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-3, 6-9, 12-14, and 17-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon U.S. Patent 4,330,691 (Cited by Applicants) in view of Junk U.S. Patent 3,666,040.

Regarding **claim 1**, Gordon teaches a speaker support system (including two superimposed rectangular adapted for use with a suspended ceiling (Fig. 3) of the type having a suspended ceiling grid (formed by 42, 44, Fig. 3; Figs. 14, 15) including a plurality of ceiling grid openings and a plurality of ceiling panels (182) sized to fit within the ceiling grid openings (see Figs. 3, 4, 10, 14, 15, and respective portions of the specification), the speaker support system comprising:

a speaker support base (larger rectangular 62, Fig. 4) capable of supporting at least one speaker (10) within the grid opening without interfering with the operation of the speaker (col. 3, lines 16-23);

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a guide flange (vertical edge of 62, to project with respect to small rectangular 60) integral to the speaker support base (larger rectangular 62, Fig. 4), the guide flange being adapted to align at least a portion of a ceiling tile within a ceiling grid opening (see Figs. 3, 4, 15); and

a support flange (bottom shoulder 64, Fig. 4) of integral to the base portion (larger rectangular 62, Fig. 4), the support flange being adapted to support at least a portion of the ceiling tile (top shoulder 54, Fig. 4) within the ceiling grid opening so that at least a portion of the ceiling grid opening is filled with the speaker support base (larger rectangular 62, Fig. 4) and the remaining portion of the ceiling grid opening is filled with the portion of the ceiling tile (tile portion of integral ceiling tile-loudspeaker assembly 55, Fig. 4; col. 3, lines 11-23).

Gordon does not explicitly disclose speaker support base replacing at least part of a ceiling panel.

Junk discloses a ceiling ring having a speaker can be mounted in a cutout hole of a ceiling panel, grill (28, Figs. 2, 3, 4, 11) supports the speaker (see Figs. 1-4; col. 1, lines 22-31; col. 2, lines 10-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a ceiling ring of Junk teaching with a speaker support system of Gordon such that a speaker support base replacing at least part of a ceiling panel as claimed for purpose of being adapted to be used very simply and expeditiously as suggested by Junk in column 2, lines 55-56.

Regarding **claim 2**, Gordon in view of Junk teaches a speaker the speaker support system of claim 1. Gordon as modified further including a support plate (top rectangular 60, Fig. 4) mounted to the speaker support base (bottom rectangular 62, Fig. 4) to strengthen the speaker support base (col. 3, lines 11-23).

Regarding **claim 3**, Gordon in view of Junk teaches a speaker the speaker support system of claim 1. Gordon as modified further including at least one speaker (10, Fig. 4) mounted on the speaker support base.

Regarding **claim 6**, Gordon further teaches wherein the speaker support base, the guide flange and the support flange are formed from a single piece of material.

Regarding **claim 7**, Gordon further teaches wherein the speaker support system base is perforated (14, Fig. 1; col. 2, lines 49-54).

Regarding **claim 8**, this is a combination of limitations of Claim 1 and Claim 2. Therefore Claim 8 is interpreted and thus rejected for the reasons set forth above in the rejection of claims 1 and 2.

Regarding **claims 9, and 12-13**, these claims having similar limitations of Claims 3, and 6-7, respectively. Therefore Claims 9, and 12-13 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 3, and 6-7.

Regarding **claim 14**, this is a combination of limitations of Claim 1 and Claim 6. Therefore Claim 14 is interpreted and thus rejected for the reasons set forth above in the rejection of claims 1 and 6.

Regarding **claim 17**, this claim having similar limitations of Claim 7. Therefore Claim 17 is interpreted and thus rejected for the reasons set forth above in the rejection of claim 7.

Regarding **claim 18**, Gordon further teaches wherein the plate includes an aperture (14, Fig. 1) and the speaker support system base is perforated with a plurality of closely spaced apart perforations in an area in alignment with the aperture in the plate to thereby provide a site for position of a speaker on the speaker support system which position permits free passage of sound from the speaker through the speaker support system the speaker support system base is perforated (i.e., extended from rear surface; col. 2, lines 49-54).

Regarding **claim 19**, Gordon in view of Junk teaches the speaker support system of claim 14. Gordon further including at least one speaker (10, Fig. 4) mounted on the speaker support base.

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Regarding **claim 4**, Gordon in view of Junk teaches the speaker support system of claim 1. Gordon does not explicitly disclose wherein the speaker support base fills about a first half of the ceiling grid opening and the ceiling tile fills about the second half of the ceiling grid opening.

Nevertheless, as would have been well known in the art at the time the invention was made, those of ordinary skill in the art would be able to modify the size of an integrated ceiling tile-loudspeaker taught by Gordon such that the speaker support base fills about a first half of the ceiling grid opening and the ceiling tile fills about the second half of the ceiling grid opening as claimed.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform such modification for purpose of providing loudspeakers having relatively small and distortionless active elements as suggested by Gordon in column 2, lines 47-48.

Regarding **claim 5**, Gordon in view of Junk teaches the speaker support system of claim 1. Gordon does not explicitly disclose wherein the speaker support base fills about three quarters of the ceiling grid opening and the ceiling tile fills about one quarter of the ceiling grid opening.

Nevertheless, as would have been well known in the art at the time the invention was made, those of ordinary skill in the art would be able to modify the size of an integrated ceiling tile-loudspeaker taught by Gordon such that the speaker support base

fills about three quarters of the ceiling grid opening and the ceiling tile fills about one quarter of the ceiling grid opening as claimed.

Regarding **claims 10-11**, these claims having similar limitations of Claims 4-5, respectively. Therefore Claims 10-11 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 4-5.

Regarding **claims 15-16**, these claims having similar limitations of Claims 4-5, respectively. Therefore Claims 15-16 are interpreted and thus rejected for the reasons set forth above in the rejection of claims 4-5.

### ***Response to Arguments***

3. Applicant's arguments filed on October 25, 2005 have been fully considered but are moot in view of the new grounds of rejection.

It should be noted that as presented above, a guide flange corresponds to vertical edge of (62), which projects with respect to small rectangular 60.

### ***Conclusion***

4. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Con P. Tran whose telephone number is (571) 272-7532. The examiner can normally be reached on M - F (8:30 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Vivian C. Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306; and 571-273-8300 effective July 15, 2005.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic  
Business Center (EBC) at 866-217-9197 (toll-free).

cpt CPJ  
January 20, 2006

  
XU MEI  
PRIMARY EXAMINER